R^2 is selected from Arg, Lys, Ala, Orn, Ser(Ac), Sar, D-Arg and D-Lys;

R^3 is selected from the group consisting of Val, Ala, Leu, norLeu, Ile, Gly, Pro, Aib, Acpc, Lys and Tyr;

R^4 is selected from the group consisting of Tyr, $Tyr(PO_3)_2$, Thr, Ser, Ala, homoSer and azaTyr;

R^5 is selected from the group consisting of Ile, Ala, Leu, norLeu, Val and Gly;

R^6 is selected from the group consisting of His, Arg or 6-NH_2-Phe;

R^7 is selected from the group consisting of Pro or Ala; and

R^8 is selected from the group consisting of Phe, Phe(Br), Ile and Tyr;

excluding sequences including R^4 as a terminal Tyr group, and

wherein the active agent is not SEQ ID NO:1 or SEQ ID NO:19,

for a time and under conditions effective to augment erythropoiesis.

40.(Amended) The method of claim 1 wherein the contacting occurs in vivo and a dosage of active agent is between 0.1 ng/kg and 10.0 mg/kg.

41.(Amended) The method of claim 1 wherein the contacting occurs in vitro and a dosage of active agent is between 0.1 ng/ml and 10.0 mg/ml.

Please add the following new claims:

45.(New) The method of claim 43, wherein the anemia is associated with chronic renal failure.

46.(New) The method of claim 43, wherein the anemia is associated with end-stage renal disease.